Docket No.: 1752-0151P

**AMENDMENTS TO THE CLAIMS** 

1. (Currently Amended) A process for producing a peptide or a peptide derivative by

using a reaction system of transcribing a DNA into an RNA and then translating the RNA

produced or a reaction system of translating an RNA in vitro wherein more than one protein

component all protein components of the reaction system is are labeled with a first substance

which adheres to a second substance, and said second substance is used as an adsorbent for

capturing said labeled protein components after translating translation of the peptide or peptide

derivative to allow the separation of the produced peptide or a peptide derivative from the

labeled protein components constituting the reaction system.

2. (Previously Presented) The process for producing a peptide or a peptide derivative as

claimed in claim 1, wherein a plural number of combinations of said first and second substances

are used in the process.

3. (Currently Amended) The process for producing a peptide or a peptide derivative as

claimed in claim 1, wherein the said protein components labeled with the first substance are a

part or all of protein factors and enzymes for the transcription or translation reaction.

4. (Currently Amended) The process for producing a peptide or a peptide derivative as

claimed in claim 3, wherein said protein factors and enzymes for the transcription or translation

reaction are selected from the group consisting of initiation factors, elongation factors,

GMM/TJS/py

Application No. 09/983,067

Amendment dated March 2, 2006

After Final Office Action of November 2, 2005

termination factors, aminoacyl-tRNA synthetase, methionyl-tRNA transformylase, RNA

polymerase.

5. (Currently Amended) The process for producing a peptide or a peptide derivative as

claimed in claim 1, wherein the protein components labeled with the first substances are the

protein factors and enzymes for the transcription or translation reaction and other enzymes

required in the constitution of the reaction system.

6. (Currently Amended) The process for producing a peptide or a peptide derivative as

claimed in claim 5, wherein said other enzymes required in the constitution of the reaction

system other than the factors and enzymes for the transcription or translation reaction are

selected from the group consisting of enzymes for regenerating energy in the reaction system and

enzymes for hydrolyzing inorganic pyrophosphoric acid formed during the transcription or

translation reaction.

7. (Original) The process for producing a peptide or a peptide derivative as claimed in

claim 1, wherein the reaction system for transcribing a DNA into an RNA and then translating

the RNA produced or the reaction system translating an RNA in vitro is free from termination

factors.

GMM/TJS/py

Docket No.: 1752-0151P

Application No. 09/983,067 Amendment dated March 2, 2006

After Final Office Action of November 2, 2005

8. (Previously Presented) The process for producing a peptide or a peptide derivative as

claimed in claim 1, wherein a pair of said first and second substances adhering to each other are

substances mutually interacting in affinity chromatography.

9. (Previously Presented) The process for producing a peptide or a peptide derivative as

claimed in claim 8, wherein the combination of said first and second substances mutually

interacting in affinity chromatography is selected from among combinations of substances

capable of forming a bond between a protein or a peptide fragment and a metal ion, a bond

between an antigen and an antibody, a bond between a protein and a protein or a peptide

fragment, a bond between a protein and a specific low-molecular weight compound selected

from the group consisting of amino acids, DNAs, dyes, vitamins and lectins, a bond between a

protein and a saccharide, or a bond between a protein or a peptide fragment and an ion exchange

resin.

10. (Previously Presented) The process for producing a peptide or a peptide derivative as

claimed in claim 9, wherein said combination of first and second substances forming a bond

between a protein or a peptide fragment and a metal ion is a histidine tag and a nickel complex or

a cobalt complex.

11. (Previously Presented) The process for producing a peptide or a peptide derivative as

claimed in claim 1, wherein said combination of first and second substances is selected from the

substances magnetically adhering to each other.

GMM/TJS/py

Docket No.: 1752-0151P

Application No. 09/983,067 Amendment dated March 2, 2006

After Final Office Action of November 2, 2005

12. (Currently Amended) A kit of protein components for a reaction system for

producing a peptide or a peptide derivative by transcribing DNA into RNA and then translating

the RNA produced or translating RNA in vitro wherein the kit comprises more than one protein

eomponent all protein components of the reaction system which is are labeled with a first

substance which adheres to a second substance which is used as an adsorbent for capturing said

labeled protein components after translating and that said protein component is selected from the

group consisting of enzymes and protein factors constituting the reaction system.

13. (Currently Amended) The kit of protein components as claimed in claim 12, wherein

said protein components are selected from the protein factors and enzymes for the transcription or

translation reaction and other enzymes required in the constitution of the reaction system.

14. (Currently Amended) The kit of protein components as claimed in claim 13, wherein

said protein factors and enzymes for the transcription or translation reaction are selected from the

group consisting of initiation factors, elongation factors, termination factors, aminoacyl-tRNA

synthetase, methionyl-tRNA transformylase and RNA polymerase.

15. (Currently Amended) The kit of protein components as claimed in claim 13, wherein

said enzymes required in the constitution of the reaction system other than the protein factors and

enzymes for the transcription or translation reaction are selected from the group consisting of

GMM/TJS/py

Docket No.: 1752-0151P

Application No. 09/983,067

Amendment dated March 2, 2006

After Final Office Action of November 2, 2005

enzymes for regenerating energy in the reaction system and enzymes for hydrolyzing inorganic

pyrophosphoric acid formed during the transcription or translation reaction.

16. (Previously Presented) The kit of protein components as claimed in claim 12 which

comprises an adsorbent as said second substance for capturing the protein components labeled

with said first substance.

17. (Currently Amended) The kit of protein components as claimed in claim 12 which

comprises a plural number of combinations of said first substance for labeling more than one

protein component constituting the reaction system with said second substance used as an

6

adsorbent for capturing the labeled protein components.

18-20. (Canceled).

GMM/TJS/py

Docket No.: 1752-0151P